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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,123	04/13/2004	Nianci Han		6448

61285 7590 08/23/2006

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EXAMINER
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LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/824,123

**Applicant(s)**

HAN ET AL.

**Examiner**

Michael La Villa

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 23-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I in the reply filed on 30 May 2006 is acknowledged. The traversal is on the ground(s) that the non-elected group is related to the elected group and that examination of both groups is expedient. This is not found persuasive. The traversal is moot on the grounds that applicant has cancelled the claims of the non-elected group. Moreover, the restriction requirement demonstrated that the related groups were nevertheless distinct and that search and examination posed a serious burden, as evidenced by the separate classification of the groups.
2. The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
  4. A person shall be entitled to a patent unless –
  5. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
  6. (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
  7. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4, 6, and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Morita et al. USPA 2002/0012791 for the reasons of record in the Office Action mailed on 28 February 2006.
9. Claims 1-4, 7-10, and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakawa et al. USPN 6,447,937 for the reasons of record in the Office Action mailed on 28 February 2006.
10. Claims 1, 2, 7, and 8 are rejected under 35 U.S.C. 102(a and e) as being anticipated by O'Donnell et al. USPA 2004/0002221 for the reasons of record in the Office Action mailed on 28 February 2006.
11. Claims 1-5 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeuchi et al. JP 11-229142 for the reasons of record in the Office Action mailed on 28 February 2006.
12. Claims 1-4, 7-10, and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Otsuki USPA 2001/003271. Otsuki teaches a substrate processing chamber, including its components, having a sprayed Y<sub>2</sub>O<sub>3</sub> and Al<sub>2</sub>O<sub>3</sub> coating on the surfaces thereof. See Otsuki (Abstract; paragraphs 41-46, 62, 65, 66; and Claims 1-27). While the coating layer of Otsuki is applied by spraying, electroplated layers could encompass the structural and compositional characteristics of the coating layers of Otsuki, particularly in view of the lack of claimed processing parameters.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 7-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. USPA 2002/0012791 for the reasons of record in the Office Action mailed on 28 February 2006.

***Allowable Subject Matter***

16. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Amendment***

17. In view of applicant's amendments and arguments, the objection to the Specification, the claim objection, and the section 112, second paragraph

rejections of the Office Action mailed on 28 February 2006 are overcome and therefore withdrawn.

18. In view of applicant's amendments and arguments, the section 102 rejections over Goward, Jackson, and Aguero of the Office Action mailed on 28 February 2006 are overcome and therefore withdrawn.

19. In view of applicant's amendments and arguments, applicant traverses the section 102 rejections over Morita, Murakawa, O'Donnell, and Takeuchi of the Office Action mailed on 28 February 2006. For example, applicant argues that Morita's coating, formed by sintering, "does not have the same structure as a electroplated coating as claimed." Applicant's claim does not recite any process parameters or limitations on other steps that may be performed, such as annealing, incorporation of fugitives, sintering, and post-treatments, among others. Therefore, the conclusion that applicant's layer described as a product-by-process limitation necessarily cannot encompass the layers exemplified in these prior art references has not been established. With respect to the rejection over Takeuchi, applicant concedes that Takeuchi teaches forming YSZ by "electrochemical methods," but argues that this layer would not have the same structure as an "electroplated coating as claimed." The layer of Takeuchi is formed by the method claimed. It is unclear what structural feature is necessarily present by virtue of the claim that is absent in Takeuchi. Rejections are maintained.

20. In view of applicant's arguments and amendments, applicant traverses the section 103 rejection over Morita of the Office Action mailed on 28 February 2006. Applicant points out that layers formed by sintering would imply a heat resistant substrate, not required by the claim. The claim does not preclude heat resistant substrates, and so the argument is not persuasive. Applicant argues that layers formed by sintering and electroplating are structurally different. Absent any processing conditions and limitations on additional processing steps, it is unclear what is the basis for establishing that the resulting coating necessarily must be structurally different. Rejection is maintained.

***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa  
6 August 2006



MICHAEL E. LAVILLA PH.D.  
PRIMARY EXAMINER